

Amendments to the Claims

Claim 1 (currently amended): A method of isolating a desired nucleic acid from a biological solution, that may contain other species including nucleic acids, proteins, other high molecular weight compounds, salts and other low-molecular weight substances, which method comprises ~~to selectively precipitate~~ precipitating the desired nucleic acid, while leaving the other species in solution, by adding a polycationic precipitating agent to the solution and allowing it to form an insoluble complex with said desired nucleic acid, wherein the precipitating agent is a highly charged linear polymer that ~~comprises~~ includes quaternary amino groups, and further wherein the precipitating agent is added to the solution in the presence of a salt, wherein the in such an amount that the of said precipitating agent is sufficient to attain a charge ratio $[+]/[-]$ between ~~polycationic~~ the precipitating agent and nucleic acid is of \geq about 0.5, ~~preferably \geq about 1~~, during the precipitation.

Claim 2 (currently amended): ~~A method according to~~ The method of claim 1, wherein the precipitating agent ~~comprises~~ includes at least 25 positive charges.

Claim 3 (currently amended): ~~A method according to~~ The method of claim 1 ~~or 2~~, ~~which comprises~~ further comprising a step of estimating the number of negative charges in the biological solution before addition of the precipitating agent.

Claim 4 (currently amended): ~~A method according to any one of the preceding claims,~~ The method of claim 1, wherein the desired nucleic acid is a plasmid.

Claim 5 (currently amended): ~~A method according to any one of the preceding claims,~~
The method of claim 1, wherein the biological solution is a cell lysate.

Claim 6 (currently amended): ~~A method according to~~ The method of claim 5, wherein
the cell lysate is an alkaline cell lysate.

Claim 7 (currently amended): ~~A method according to~~ The method of claim 5 or 6,
wherein the cell lysate is pre-treated before addition of the precipitating agent.

Claim 8 (currently amended): ~~A method according to any one of the preceding claims,~~
The method of claim 1, wherein the ratio of polymer molecular weight (gram per
mol)/polymer charge (number of charges per polymer chain) in the precipitating agent
is less than about 1000, ~~preferably less than about 400~~.

Claim 9 (currently amended): ~~A method according to~~ The method of claim 8, wherein
the precipitating agent comprises at least about 500, ~~preferably at least about 1000~~,
positive charges.

Claim 10 (currently amended): ~~A method according to any one of the preceding
claims,~~ The method of claim 1, wherein the precipitating agent is selected from the
group ~~that consists~~ consisting of poly(N,N'-dimethyldiallylammonium chloride), an
aliphatic ionene ~~bromide~~ bromides and a poly(N-alkyl -4-vinylpyridinium halides
~~halide~~).

Claim 11 (currently amended): ~~A method according to any one of the preceding claims,~~ The method of claim 1, wherein the salt concentration of the solution is controlled during the addition of the precipitating agent to allow ~~the~~ quantitative selective precipitation of the nucleic acid/polycation complex.

Claim 12 (currently amended): ~~A method according to any one of the preceding claims, which also comprises to recover~~ The method of claim 1, further comprising recovering the desired nucleic acid from the precipitate so formed by separating the precipitate from the solution and subsequent dissolution and/or destruction of the complex.

Claim 13 (currently amended): ~~A method according to~~ The method of claim 12, wherein the polyelectrolyte complex is dissolved and/or destructed by addition of a salt to free the desired nucleic acid in the solution.

Claim 14 (currently amended): ~~A method according to~~ The method of claim 12 or 13, wherein the dissolution and/or destruction of the complex is performed at a salt concentration above 0.5 M, ~~preferably above 3 M,~~ depending on the charge ratio [+] / [-] and salt nature.

Claim 15 (cancelled)

Claim 16 (currently amended): ~~A method according to any one of claims 12-15, which comprises to isolate~~ The method of claim 12, further comprising isolating a first desired nucleic acid from the first precipitation formed, to separate said first

precipitation from the biological solution and to precipitate a second desired nucleic acid from the remaining solution by a continued addition of precipitating agent.

Claim 17 (currently amended): ~~Use of a method according to any one of claims 1-16~~

The method of claim 1 for isolating nucleic acids that have been subjected to modification reactions.